Aquaculture 281 (2008) 162 – 163

Contents lists available at ScienceDirect

Aquaculture

journal homepage: www.elsevier.com/locate/aqua-online

Contents of *Aquaculture*, Volume 281

Vol. 281 Nos. 1–4 **1 September 2008**

Review Article

Probiotics in aquaculture: Challenges and outlook
Y.-B. Wang, J.-R. Li (Hangzhou, China) and J. Lin (Melbourne, FL, USA) 1

Diseases

Effects of anthraquinone extract from rhubarb *Rheum officinale* Bail on the crowding stress response and growth of common carp *Cyprinus carpio* var. *Jian*
J. Xie, B. Liu, Q. Zhou, Y. Su, Y. He, L. Pan, X. Ge and P. Xu (Wuxi City, China) 5

Infection of *Nematopsis* oocysts in different size classes of the farmed mussel *Perna viridis* in Thailand
C. Tuntiwaranuruk, K. Chalermwat, V. Pongsakchat, A. Meepool, E.S. Upatham (Chonburi, Thailand) and M. Kruatrachue (Bangkok, Thailand) 12

Efficiency of diagnostic techniques for the parasite, *Bonamia ostreae*, in the flat oyster, *Ostrea edulis*
S.A. Lynch, M.F. Mulcahy and S.C. Culloty (Cork, Ireland) 17

Husbandry and Management

Intensive larval husbandry and fingerling production of cobia *Rachycentron canadum*
D.D. Benetti, B. Sardenberg, A. Welch, R. Hoenig, M.R. Orhun and I. Zink (Miami, Florida, USA) 22

Effects of fish bioturbation on the vertical distribution of water temperature and dissolved oxygen in a fish culture-integrated waste stabilization pond system in Vietnam
M. Phan-Van (Ho Chi Minh City, Viet Nam), D. Rousseau (DA Delft, The Netherlands) and N. De Pauw (Gent, Belgium) 28

Density-dependent effects of a new invasive false mussel, *Mytilopsis trautwineana* (Tryon 1866), on shrimp, *Litopenaeus vannamei* (Boone 1931), aquaculture in Colombia
D.C. Aldridge (Cambridge, UK), M. Salazar (Bogotá, Colombia), A. Serna (Bolivar, Colombia) and J. Cock (Bogotá, Colombia) 34

The reproductive cycle of white clam *Spisula solida* (L.) (Mollusca: Bivalvia): Implications for aquaculture and wild stock management
S. Joaquim, D. Matias, B. Lopes (Olhão, Portugal), W.S. Arnold (St. Petersburg, FL, USA) and M.B. Gaspar (Olhão, Portugal) 43

Promise and pitfalls of locally abundant seaweeds as biofilters for integrated aquaculture
N.A. Paul and R. de Nys (Townsville, Australia) 49

Development of longline mussel farming and the influence of sleeve spacing in Prince Edward Island, Canada
L.A. Comeau (Moncton, New Brunswick, Canada), A. Drapeau (Charlottetown, Prince Edward Island, Canada), T. Landry (Moncton, New Brunswick, Canada) and J. Davidson (Charlottetown, Prince Edward Island, Canada) 56

Response of early stage spiny lobster *Jasus edwardsii* phyllosoma larvae to changes in temperature and photoperiod
M. Bermudes (Clifton Beach, Taroona, Tasmania, Australia) and A.J. Ritar (Taroona, Tasmania, Australia) 63

Effects of photoperiod on growth, mortality and digestive enzymes in miiuy croaker larvae and juveniles
X. Shan (Qingdao, Beijing, PR China), Z. Xiao (Qingdao, PR China), W. Huang (Qingdao, Beijing, PR China) and S. Dou (Qingdao, PR China) 70

Effects of body weight and temperature on feed intake, gonad growth and oxygen consumption in green sea urchin, *Strongylocentrotus droebachiensis*
S.I. Siikavuopio, A. Mortensen and J.S. Christiansen (Tromsø, Norway) 77

Artemia nauplii and two commercial replacements as dietary supplement for juvenile signal crayfish, *Pacifastacus leniusculus* (Astacidae), from the onset of exogenous feeding under controlled conditions
A. González, J.D. Celada, R. González, V. García, J.M. Carral and M. Sáez-Royuela (Léon, Spain) 83

Nutrition

Lipid and fatty acid dynamics in Atlantic cod, *Gadus morhua*, tissues: Influence of dietary lipid concentrations and feed oil sources
M. Jobling (Tromsø, Norway), O. Leknes (Alta, Norway), B.-S. Sæther (Tromsø, Norway) and E.Å. Bendiksen (Trondheim, Norway) . . . 87
Evaluation of four dietary protein sources for use in microbound diets fed to megalopae of the blue swimmer crab, *Portunus pelagicus*
S. Castine, P.C. Southgate and C. Zeng (Townsville, Queensland, Australia) . . . 95
Effects of feeding copepod and *Artemia* on early growth and behaviour of the self-fertilizing fish, *Rivulus marmoratus*, under laboratory conditions
M.V.C. Grageda (Nagasaki, Japan; Laguna, Philippines), T. Kotani, Y. Sakakura and A. Hagiwara (Nagasaki, Japan) . . . 100
Serotonin modulation of hemolymph glucose and crustacean hyperglycemic hormone titers in *Fenneropenaeus indicus*
S. Sathyanandam, S. Vasudevan and M. Natesan (Tamilnadu, India) . . . 106
Potential of using a blend of rendered animal protein ingredients to replace fish meal in practical diets for malabar grouper (*Epinephelus malabricus*)
Y. Wang (Zhejiang, PR China), K. Lai, H. Han, Z.-X. Zheng (Shanghai, PR China) and D.P. Bureau (Guelph, Ontario, Canada) . . . 113

Physiology and Endocrinology

Nitrate-induced elevations in circulating sex steroid concentrations in female Siberian sturgeon (*Acipenser baeri*) in commercial aquaculture
H.J. Hamlin (Sarasota, Gainesville, FL, USA), B.C. Moore, T.M. Edwards, I.L.V. Larkin, A. Boggs, W.J. High (Gainesville, FL, USA), K.L. Main (Sarasota, FL, USA) and L.J. Guillette Jr. (Gainsville, FL, USA) . . . 118
The effects of the GnRH agonist, azagly-nafarelin (Gonazon™), on ovulation and egg viability in the European grayling (*Thymallus thymallus* L.)
T. Mikolajczyk, M. Sokolowska-Mikolajczyk, P. Szczerbik, M. Duc (Cracow, Poland), K. Goryczko, S. Dobosz (Rutki, Poland), J. Glogowski (Olsztyn, Poland), P. Epler (Cracow, Poland) and W.J. Enright (Dublin, Ireland) . . . 126
Metal provisioning of ova in walleye and lake whitefish
T.A. Johnston (Sudbury, ON, Canada), M.D. Wiegand, S. Mittermuller (Winnipeg, MB, Canada), J.M. Casselman (Kington, ON, Canada), G.G. Pyle (North Bay, ON, Canada) and W.C. Leggett (Kington, ON, Canada) . . . 131
Artificial production of regenerable free cells in the gametophyte of *Porphyra pseudolinearis* (Bangiales, Rhodophyceae)
A. Saito, H. Mizuta, H. Yasui and N. Saga (Hakodate, Japan) . . . 138

Short Communications

Development of a semi-closed aquaculture system for monitoring of individual amphioxus (*Branchiostoma lanceolatum*), with high survivorship
I.M.L. Somorjai, A. Camasses, B. Rivière and H. Escrivà (Banyus-sur-Mer, France) . . . 145
Non-infectivity of cattle *Streptococcus agalactiae* in Nile tilapia, *Oreochromis niloticus* and channel catfish, *Ictalurus punctatus*
J.C. Garcia, P.H. Klesius (Auburn, AL, United States), J.J. Evans (Lynchburg St. Chestertown, MD, United States) and C.A. Shoemaker (Auburn, AL, United States) . . . 151
The influence of coelomic fluid on in vitro fertilization success in rainbow trout (*Oncorhynchus mykiss*)
H.A. Hugunin (Moscow, ID, USA), J.E. Parsons (Sumner, WA, USA) and J.J. Nagler (Moscow, ID, USA) . . . 155
Pulsed expression of growth hormone mRNA in the pituitary of juvenile Pacific bluefin tuna under aquacultured conditions
K. Adachi, K. Kato, M. Yamamoto, K. Ishimaru (Wakayama, Japan), T. Kobayashi (Nara, Japan), O. Murata and H. Kumai (Wakayama, Japan) . . . 158

Contents of *Aquaculture*, Volume 281 . . . 162